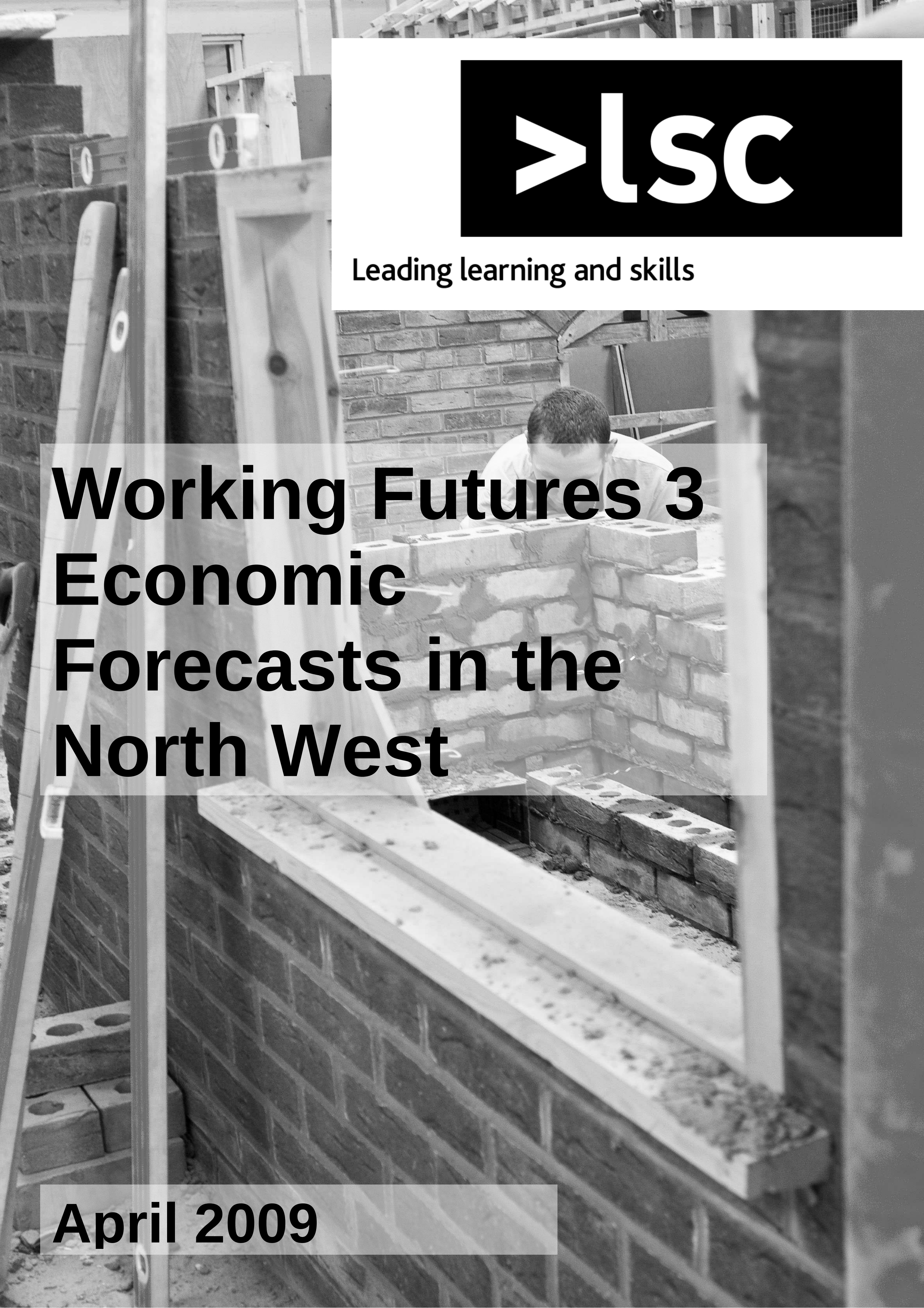

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Leading learning and skills

Working Futures 3 Economic Forecasts in the North West

April 2009

Working Futures 3 Economic Forecasts in the North West

Leading learning and skills

North West Regional Report

Executive Summary

Note: These forecasts were developed before the economic downturn took place, employment volume analysis based on the results should take this into account.

Introduction

1 Working Futures 3 is the third in a series of reports which provide a comprehensive review of the implications of technological change, changes in government policy and legislation, and changes in other economic and social drivers for the UK labour market. **No other publication provides such a comprehensive picture of the UK labour market**.

2 The shift in policy to a Demand Led funding system, involving the expansion of the Train to Gain programme and the establishment of the National Apprenticeship Service, has meant that alignment of government funded training provision to the industrial structure of the job market is vital to the success of the skills system.

3 Forecasts are used to provide some indication to policy makers and other labour market participants about likely developments in an uncertain world. In light of the current economic crisis, producing robust economic and labour market projections is particularly difficult. As a result **this report focuses on the longer term forecasts** provided by Working Futures 3.

4 It is also important to emphasise that the views presented here are not the only possible future, they represent **a starting point for debate and reflection**.

5 This report provides an analysis of the Working Futures 3 data set, rather than a review of the wider economy. It has been **produced to aid LSC colleagues and partners in analysing a valuable information resource** regarding the region's economic direction.

Key Points for Discussion

Direction of the Economy

6 The information in this report describes one of many possible futures for the regional economy. A discussion point this raises is **how and to what extent this information should be used to drive action by key stakeholders**.

7 For example, Figure 1 indicates that employment volumes in the Distribution & Transport sector are set to increase from 995,000 in 2007 to 1.04 million in 2017, therefore **how should regional partners respond to this change?** Will the change itself come about 'naturally' as a direct result of technological, policy and legislative changes? Does the forecast indicate that

further skills and training resources should be directed toward this sector of industry to support growth?

8 Figure 1 also indicates that three of the six major industrial groups (Distribution & Transport, Non-Marketed Services and Business & Other Services) will see increases in the volume of people employed, whereas Manufacturing, Construction and Primary Sector & Utilities are anticipated to maintain relatively low levels or experience a decrease in employment volumes. Should regional partners attempt to pre-empt these changes via the re-skilling of staff? Or **should efforts be made to maintain or boost industries that are anticipated to decline in order to maintain the diversity of the economic base**.

9 The forecast decline in the manufacturing industry is another good example of the questions posed by Working Futures 3. Over the ten year period a 15.2 per cent reduction is anticipated in the volume of employees. Does this mean that the region's skills strategy should focus on maintaining people in these jobs, which can be relatively high skilled and well paid? Or instead should it focus on re-skilling individuals to enable sustained employment in another area of work?

10 The region's high levels of employment in the public sector are highlighted in this report - 5.1 per cent overall growth is expected to 928,000 employees in the non-Marketed Services sector[1]. A particularly high proportion of jobs in Greater Merseyside are in the public sector (34.4% in 2007, 35% forecast in 2017), and the implications of this for education and training provision need to be established. However this could present an opportunity. In order to raise the volume of participation in apprenticeships the Public Sector is being targeted as an employer with many potential apprenticeship opportunities. Apprenticeships have always been strong in Greater Merseyside and with a high proportion of total employment in this sector, **Greater Merseyside has an opportunity to lead the North West in the expansion of Apprenticeships in the Public Sector**.

11 The North West Regional Strategy is currently being developed, produced as the successor document to the Regional Economic Strategy and the Regional Spatial Strategy. This work has the potential to shape the direction of the North West's economy for the coming years. Information contained in this report is directly relevant to the development of the strategy, for example the opportunity for the region to lead in emerging markets such as renewable energy.

12 **The Cumbria Coast has the potential to be a world leader** in this developing area, with expertise in tidal power generation and nuclear power and decommissioning, however the forecasts shown in this report show a reduction in the Mining, Quarrying and Utilities sub-sector of 27 per cent from 11,000 employees. The Mining, Quarrying and Utilities sub-sector is a wider industrial area than just the clean energy market, but **with an increasing focus on sustainability and higher level scientific skills, what are the implications of both the employee volumes and the skills needs for training requirements?** And will the Regional Strategy identify further

[1] Including Public Admin & Defence, Education and Health & Social Work

emerging market opportunities that the learning and skills sector can respond to?

The Balance of Employment between Males and Females

13 Males make up 52.2 per cent of the working age population of the region, and 54.6 per cent of the volume of total employment. Success rates for young people in education and training show that by age 19 females consistently out perform males in attainment of qualifications[2]. However in the North West it is anticipated that there will be 252,000 more male employees than female by 2017. Given that all economic forecasts identify the need to move to a more highly skilled workforce, this may suggest that **the North West is not maximising the contribution of skilled female employees** because of lower female participation in the labour market. At the same time, it suggests a need to focus on increasing male educational attainment.

14 When an analysis of employment by gender is conducted by industrial sector and occupation more variations (and possible concerns) emerge. A striking sectoral example is in the construction sector, which relies heavily on skilled workers. **There are 23,700 female construction employees, however less than 200 of these are in skilled trades occupations** (0.8%), whereas 30.1 per cent of women working in Construction are in administrative occupations. In a demand led system research may be required to assess whether female employees feel they have the opportunities to enter skilled construction trades and that support is in place for them to do so.

15 There is a forecast reduction in employment volumes in the Food, Drink & Tobacco sector (a sub-sector of manufacturing). A reduction of 10.7 per cent to 49,000 is anticipated by 2017, however it is expected that **the decline will be entirely amongst female workers** (from 19,000 in 2007, to 0 in 2017) and that the volume of males employed will remain relatively static.. If this forecast becomes reality, there will be 19,000 additional females in the region potentially out of work and requiring training provision to enable entry to sustained employment.

Occupational Structure

16 The predicted decline in industry areas such as manufacturing reflects global shifts in these industries in recent years. Analysts have concluded from this that the UK economy will have to evolve to a knowledge based (or value added) structure in order to maintain competitiveness on a global scale. This is reflected in the WF3 occupational forecasts which project **an increase in Managers & Senior Officials, Professional Occupations and Associate Professional & Technical Occupations** and a corresponding reduction in Administrative & Secretarial and Elementary Occupations. The implications of these changes for education and training requirements seem clear, with a focus on higher level skills. However, **attention must remain on**

[2] LSC North West Regional Strategic Analysis 2008 found at:
http://readingroom.lsc.gov.uk/lsc/NorthWest/Provision_for_Young_People_Aged_14-19.pdf

progression, especially from lower level skills. There will also be an ongoing requirement (despite volume reductions) for workers in Administrative and Elementary occupations (anticipated 790,000 employees across these 2 occupational areas combined in 2017).

Replacement Demand

17 Replacement demand is a measure of the volume of employees required to fill gaps created by existing workers through retirement, moving out of the area, or out of the profession.

18 In the North West the volume of those employed is anticipated to rise by 171,000 to 3,576,000 by 2017. However **there is expected to be a total requirement of 1,427,000 additional workers due to replacement demand of 1,256,000**.

19 Replacement demand can be viewed as a proportion of the total requirement, and in the North West this proportion is above the national rate. In this region replacement demand accounts for 88 per cent of the total requirement for workers, compared to the national rate of 85 per cent. This difference could be explained by an older working age population in the region, and therefore a higher rate of retirements forecast.

20 However, **the higher rate in the North West may also raise issues of staff retention and high turnover**. The role of the learning and skills sector is important in providing skills to contribute to increased retention of staff across occupations.

The Global Economic Crisis

21 The current recession is impacting most industry sectors in all parts of the country. This report has focussed on longer term projections because the Working Futures 3 forecasts were produced before many of the effects of the economic downturn were clear.

22 Working Futures 3 shows that the **Business and Other Services** sector is forecast to have the highest rate of growth between 2007 and 2017 of the six major industrial groups. This sector may well have been ‘hit’ hardest by the effects of the recession, as sub-sectors in this area include Banking & Insurance and Real Estate. One possible implication for policy makers in the learning and skills sector is to **anticipate the training requirements of the 870,000 people employed in this sector** in 2007, many of these people may now be facing unemployment, or a major shift in the focus of their current roles each potentially requiring support in the form of training.

Conclusion

23 Given all of the above caveats and uncertainties, it would not be advisable to use Working Futures 3 as the sole source of information on the likely direction of the economy, nor should plans for the future direction of education and training policy be based upon its findings alone. Nevertheless,

it provides some useful insights into the longer term direction for key sectors, and until more up to date forecasts are produced, is one of the best sources available for this type of information.

Introduction

Economic Forecasting

24 The economic downturn has meant that the labour market has been under increasingly intense focus for LSC colleagues as well as local and regional partners, as we seek to adapt our services to meet the changing needs of employers. It is therefore important for LSC colleagues to be aware of as much information as possible regarding the economy.

25 One type of information available is data that models (or forecasts) trends in the economy in the next few years. There are several of these models available, one of which is **Working Futures 3[3] (WF3)**.

26 The outputs of Working Futures 3 look at the period 2007 to 2017 and forecast trends in employment in this period. It is important to acknowledge at this point that recent developments in the economy have made forecasts of this nature difficult and, as a result, it is advisable to focus more on the medium to long term projections in Working Futures 3.

Why Working Futures 3?

27 Working Futures 3 is useful as it provides information at potentially very broad or very detailed levels and is also nationally consistent in terms of source data used and expression of results. However, WF3 was developed in 2007, before much of the impact of recent economic events and therefore may not be as reliable at a sub-regional level as some of the locally available tools.

28 **Knowledge of the volume of employment in each sector is a vital tool in the planning of many types of training provision**. Particularly relevant to the success of Apprenticeships and Train to Gain provision in an area is the appropriateness of the offer to the local employer base.

Purpose

29 The purpose of this report is to make colleagues aware of a resource that is available to them, as well as to enable development of further familiarity with the type of statistics that are being focussed on at the moment.

30 **This report is intended predominantly as an analysis of the Working Futures 3 data set and may be complemented and updated with emerging intelligence as appropriate**.

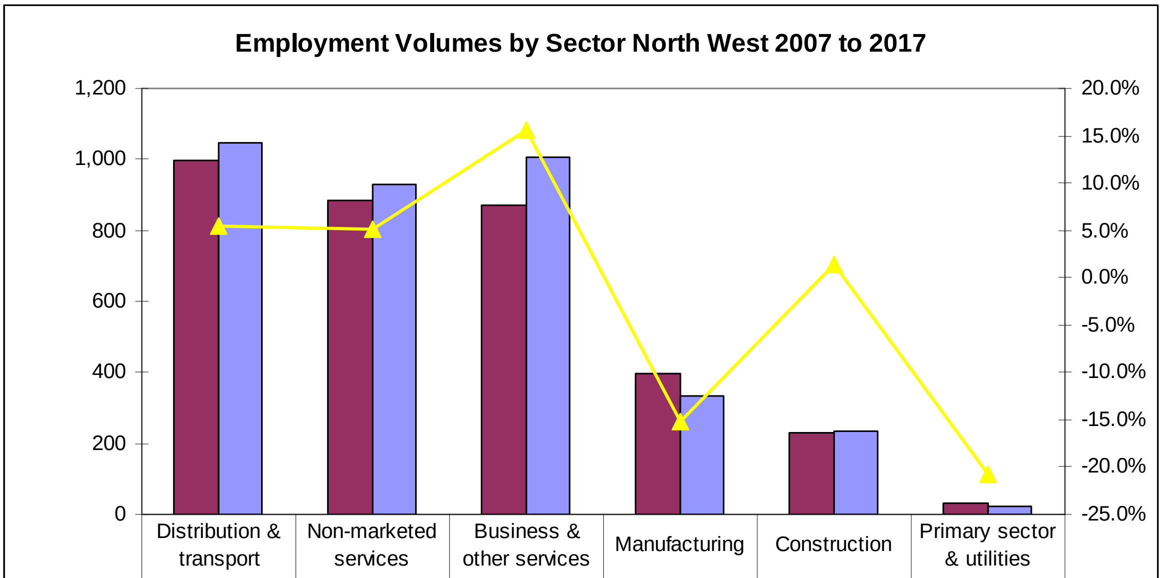
[3] Working Futures 3 is produced by the University of Warwick's Institute for Employment Research (IER)

North West Key Facts	
Working Age population (16-59/64) – Labour Force Survey October – December 2007	**4,208,000**
Volume of working Age Employed October – December 2007 Labour Force Survey (LFS) (16-59/64)	3,064,000 (72.8%)
Gender Split LFS Oct – Dec 2007	**Male**: 2,196,000 (52.2%) (54.6% of Employment) **Female**: 2,012,000 (47.8%) (45.4% of Employment)
Qualifications Attainment Ages 16-59/64 (Annual Population Survey 2007 Re-weighted)	**Level 4**: 1,068,000 (25.4%) (England: 28.3%) **Level 3**: 1,882,000 (44.7%) (England: 46.9%) **Level 2**: 2,822,000 (67%) (England: 68.2%) **No Quals**: 630,000 (15%) (England: 12.9%)
Number of Businesses Annual Business Inquiry (ABI) 2007	252,500 Of which: 83% Employ **1-10 People** 1,900 Employ **200 or more**

Sectors of Employment in the North West

The information in this section shows a breakdown of employment into 6 major industrial sectors. These provide headline information that can be further split for more detailed analysis.

Figure 1 Absolute Levels of Employment North West 2007 to 2017



	Distribution & transport	Non-marketed services	Business & other services	Manufacturing	Construction	Primary sector & utilities
2007	995	883	870	396	230	31
2017	1,049	928	1,006	336	233	24
Growth	5.4%	5.1%	15.7%	-15.2%	1.5%	-20.8%

Source: Working Futures 3 North West 6 Sectors

31 **The overall volume of employed people in the region is forecast to rise from 3,405,000 in 2007 to 3,576,000 (+5%) in 2017**. This is a slower rate of growth than the national projection of +6.5 per cent to 28,064,000 people employed in 2017.

Key Points[4]

- Distribution and Transport employs the highest volume of people (995,000). - This is forecast to grow by around 5.4 per cent between 2007 and 2017.
- Of the 6 sectors in Figure 1, Business & Other Services is projected to have the highest rate of growth (+15.7% or 136,000 employees to 1,006,000) between 2007 and 2017.
- Manufacturing (-15.2%) and the Primary Sector & Utilities (-20.8%) are forecast to decline.

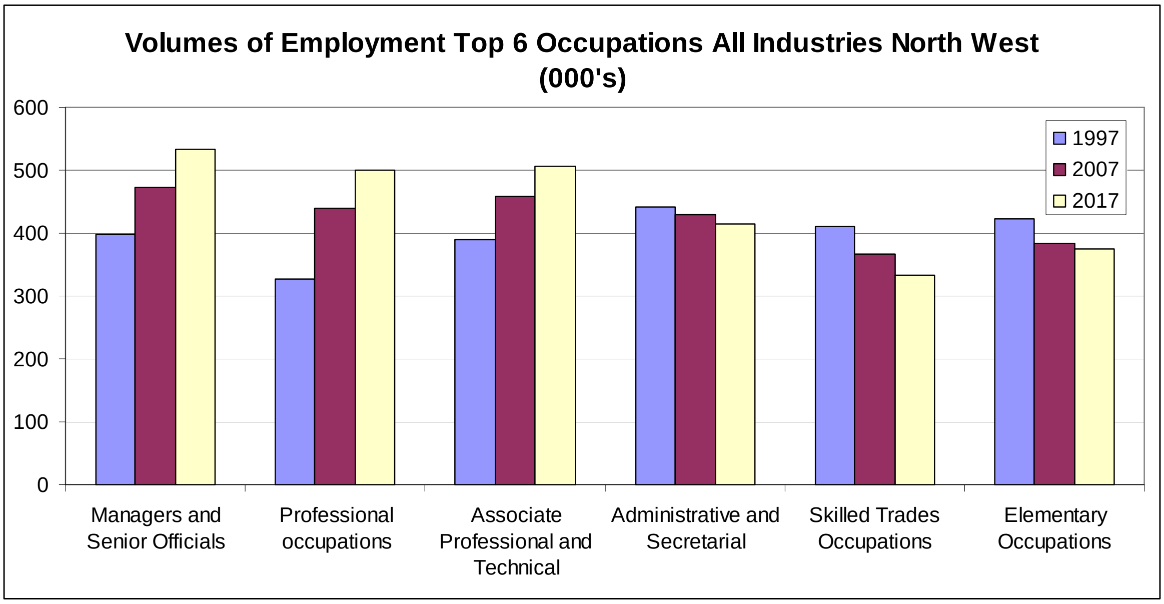
  - Manufacturing is projected to fall by 60,000 employees over 10 years, the Primary sector by 7,000.

[4] Please see the following chapters of this report for more detailed information on the sector based forecasts.

- The North West's relative share of each sector nationally is not expected to change significantly.
- The forecast slight increase in the Construction sector requires further investigation in light of the impact of recent economic events on this industry.

Employment by Occupation

Figure 2: Occupational Forecasts 1997 to 2017 All Sectors



Source: Working Futures 3 North West All Sectors

32 Figure 2 shows both the current and anticipated trend in employment split by occupation in the region. This information supports the idea that England is shifting towards a knowledge based economy, and that higher level skills are required to achieve this[5].

33 In 2007 Managers & Senior Officials, Professional Occupations and Associate Professional and Technical Occupations were all important to the economy and are expected to grow. In 2007 13.9 per cent of employees were classed as managers and senior officials, this is expected to rise to 14.9 per cent by 2017.

34 Similar proportions and increases are expected in Professional Occupations and in Associate Professional and Technical Occupations.

35 The volume of people employed in Administrative & Secretarial, as well as Elementary Occupations is expected to decline between 2007 and 2017. The combined total volume of employment in these two occupations in 2007 was 814,000 people. In 2017 this figure is expected to drop to 790,000 (-2.9%).

[5] Note: The data shown here is a summary of the high volumes of occupational employment. Other Occupations have been omitted here but are included in more detail in the sector analysis.

36 Perhaps surprising is the decline in Skilled Trades Occupations shown in Figure 2, in the context of a higher skilled economy envisioned for the future this seems illogical. However a sector-based analysis is essential here to provide intelligence to this projection. This may be closely linked to the decline in the Manufacturing sector (Please see the NW sector-based analyses later in this report).

Replacement Demand

Figure 3: Changes in Employment Volumes (000's) 2007 to 2017

	Net Change	Replacement Demand	Total Requirement
Managers & Senior Officials	60	173	233
Professional Occupations	62	164	225
Associate Professional & Technical	48	159	207
Administrative & Secretarial	-15	179	164
Skilled Trades Occupations	-34	121	87
Personal Service Occupations	54	116	170
Sales & Customer Service	21	101	121
Machine & Transport Operatives	-14	101	86
Elementary Occupations	-9	142	133
Total	**171**	**1,256**	**1,427**

Source: Working Futures 3 North West All Sectors

37 Replacement demand (RD) figures break down the employment projections by occupation. RD figures are useful to see, sometimes in the context of an overall decline, how many employees are needed to fill gaps that are created through retirements, migration out of the area (geographical or industry) or moves into another occupational area.

38 By looking at both the volume of replacement demand and the total requirement volumes from Figure 3, a replacement demand rate is attained. Where the forecast for an occupation is for a net reduction in employees between 2007 and 2017 the replacement demand ratio is higher than 100 per cent of the total requirement (examples highlighted in Figure 3).

39 For example, the rate of RD for Skilled Trades Occupations is 139 per cent, meaning that because the absolute volume of people employed at the two points (2007 and 2017) will have reduced by 34,000 to 333,000 (Figure 2), the replacement demand figures are ‘too high’. In reality, these roles are likely to be left unfilled once the current occupant moves on, meaning that the total requirement figure is a more appropriate measure of need.

40 Where an occupational area is expected to grow, for example Managers & Senior Officials, the replacement demand figures can be used to give a closer picture of the total requirement for staff. The absolute volumes of employment in Figure 2 state that the number of Managers & Senior Officials is set to expand by 60,000 between 2007 and 2017, which is correct.

However, further intelligence shows us that a further 173,000 people are needed to replace those who are leaving the occupation.

Figure 4: Employment Split by Full Time, Part Time, Self Employed

Source: Working Futures 3 North West All Sectors

Employment Status

41 Historically the highest volume of workers in the region have been in full time employment, in 2007 2,072,000 or 60.8 per cent of the total North West workforce were employed full time.

42 In 2007 27.3 per cent (930,000) of employees were employed part time. It is this group that is forecast to experience the most growth between 2007 and 2017, increasing by 8.9 per cent compared to overall growth of 5.0 per cent.

43 Part time workers are the only group shown in Figure 4 that are expected to grow at a faster rate between 2007 and 2017 than in the period between 1997 and 2007.

44 Of the three groups only the volume of self-employed people is expected to decline leading up to 2017, falling by 4.4 per cent from 403,000 to 385,000. This is in line with the lower levels of entrepreneurial activity seen in the region compared to other areas[6].

45 The Self-employed groups' share of total employment is set to decline in line with the corresponding increase for those in part time employment (+/-1% point).

[6] Measured through the volume of New VAT registrations per year.

Employment by Gender

46 Forecasts show that employment is expected to grow by 5 per cent between 2007 and 2017. However, this projection is not balanced for males and females. The volume of employed males is expected to increase by 6.3 per cent whereas the volume of employed females is forecast to grow by only 3.6 per cent.

47 **Of the total volume of employment in 2007, males account for 54.6 per cent,** this is slightly higher than the male share of the working age population (52.2%[7]).

48 The employment volume gap between males and females is 195,000 in 2007, this is set to increase to 252,000 in 2017. This disparity between the two groups, and the forecast widening of the gap could occur for a number of reasons, these may be due to equality of opportunity, cultural reasons, or duties of care meaning exclusion from the labour market.

49 The potential effects of a mismatch in gender representation in the labour market are varied. The North West has an aging working age population, in the future there will be more people living beyond retirement age than ever before. The balance between young (in employment) and old has to be maintained in order to achieve economic stability, therefore the labour market must draw on all possible sources.

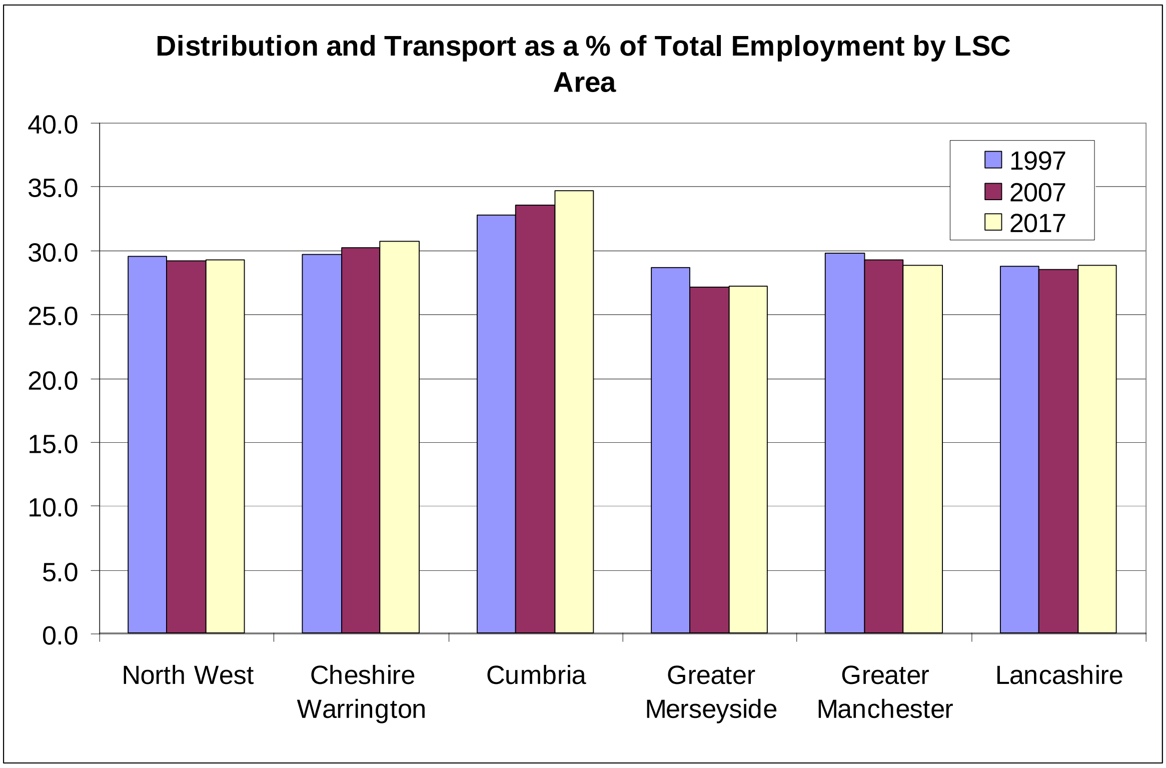
50 With the rise of manufacturing industries in other countries such as India and China, England's economy is shifting towards a value added, or knowledge based structure. It is anticipated that higher level skills are required in the workforce to achieve this. Research[8] has identified that females out-perform males in terms of attainment by age 19, at level 2, and in particular at level 3 an attainment gap exists. The economy will need to draw on as much of the skilled working age population as possible if England is to remain internationally competitive.

[7] According to the Labour Force Survey October to December 2007
[8] http://readingroom.lsc.gov.uk/lsc/NorthWest/Provision_for_Young_People_Aged_14-19.pdf

Distribution and Transport

Distribution and Transport accounts for 29.2 per cent of North West employment, a broad sector covering Distribution Relating to Motors, Wholesale Distribution, Retailing Distribution, Hotels & Catering, Transport & Storage[9] and Post & Communications

Figure 5



Source: Working Futures 3 – 6 Sector Split – North West Local LSC Areas

51 Distribution and Transport accounts for 29.2 per cent of employment in the region, this equates to just under 1 million people in 2007 (Figure 5). Regionally the proportion of people employed in this sector has remained consistent during the period, however the volume of people employed in Distribution and Transport increased between 1997 and 2007 in line with the rise in the working age population, and is forecast to continue the increase to around 1.05 million people employed in Distribution and Transport in 2017.

52 Within the region, the highest volume of people employed in this sector work in the Greater Manchester area (386,000 or 38.7% of the North West). However, it could be argued that Distribution and Transport is a greater part of the economy of Cumbria, where this sector accounts for 33.6 per cent of employment, the WF3 forecasts estimate that Distribution and Transport's share of the Cumbrian workforce is set to increase slightly between 2007 and 2017.

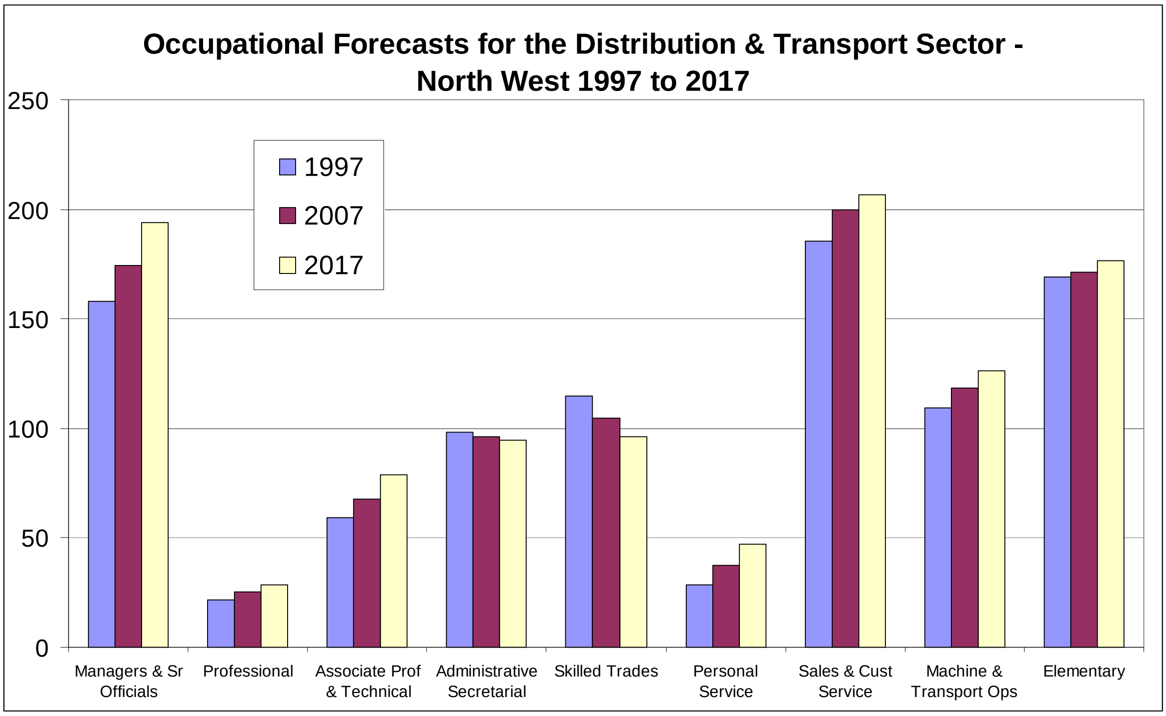
[9] Transport and Storage is a broad sub-sector including: Rail Transport, Other Land Transport, Water Transport, Air Transport and Other Transport Services

53 Cheshire & Warrington is expected to experience the fastest rate of growth in this sector leading up to 2017 with anticipated growth of 8.6 per cent, Cumbria is closest with 8.3 per cent.

54 Greater Manchester is set to have the largest rise in volumes of people employed in this sector, rising by 17,000 people. All areas within the North West are forecast to increase the volume of employees in this sector between 2007 and 2017, the slowest rate of growth is anticipated in Greater Merseyside (+3.7%).

Occupational Trends within Distribution & Transport

Figure 6



Source: Working Futures 3 – 6 Sector Split – North West

55 Figure 6 shows that within the Distribution & Transport sector in the North West the balance of employment is towards those in Sales and Customer Service Occupations. This occupational area has consistently been the highest area of employment (1997-2007), and is forecast to rise to 207,000 people by 2017.

56 However, if we look at the nature of demand in this occupational area (within Distribution & Transport), **the total anticipated demand is a requirement of 79,000 employees, rather than the 7,000 shown in Figure 6. This is due to the rate of replacement demand anticipated in this occupational area.** Replacement demand takes into account the need to replace those who have retired, or moved into another occupational area. This high rate of replacement demand as a proportion of total demand raises issues of staff retention within this occupation, further analysis may assess whether employees have the appropriate skills to achieve sustainable employment.

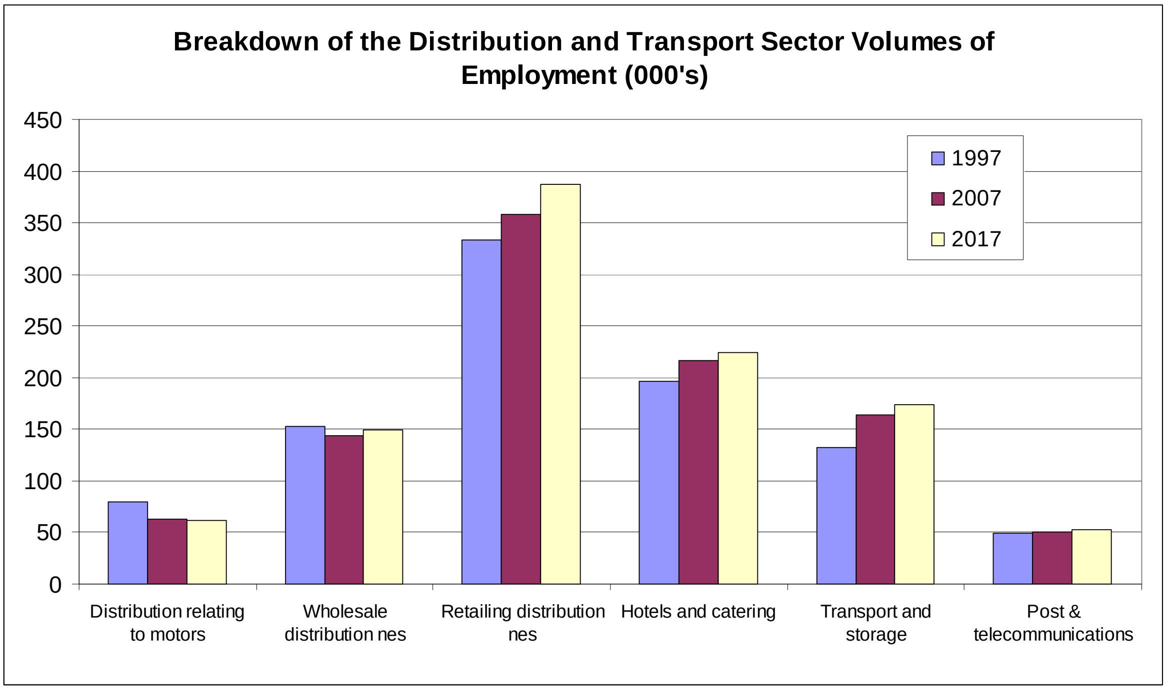
57 Between 2007 and 2017, it is forecast that the highest rate of growth will be seen in Personal Services Occupations[10] (+25.6%), however volumes of employment in this occupation within the Distribution and Transport sector are comparatively low (38,000 in 2007). Of the anticipated need for 25,000 staff in this occupational area, 60 per cent is for replacement demand, this is substantially lower than some other areas and may indicate that there is a lower level of staff turnover within this occupational area of the Distribution & Transport sector.

58 The balance of occupations within Distribution and Transport does not vary greatly between England, the North West, and its 5 sub-regional areas. However, one point to note is the slightly **higher proportion of people in Cumbria employed in elementary occupations than in other areas** (20% compared to 16% in Greater Manchester), the volume of replacement demand for this occupation in Cumbria out-weighs expansion demand by 6 to 1 (potentially leading to extensive recruitment costs to the employer) this occupational area might potentially be vulnerable in an economic downturn.

59 The male share of the working age population (16-64) in 2007 is 52.2 per cent, the male share of employment in Distribution & Transport is above this at 55.1 per cent, in 2017 this gap is forecast to increase with male employment rising to 56.9 per cent. (see paragraph 48).

Sub-Sectors within Distribution & Transport

Figure 7



Source: Working Futures 3 – 25 Sector Split – North West

[10] Including: Healthcare And Related Personal Services, Childcare And Related Personal Services, Animal Care Services, Leisure And Travel Service Occupations

60 Figure 7 shows that within the Distribution and Transport sector Retailing Distribution is prevalent and is forecast to grow leading up to 2017. Currently 358,000 people are employed in this sub-sector (2007 ABI), which is 36 per cent of all Distribution and Transport. This proportion of the total sector employment is also forecast to rise, with growth of 8.2 per cent compared to 5.4 per cent for the sector overall.

61 The Hotels & Catering sub-sector employs 216,000 people in the region, which accounts for 21 per cent of the Distribution & Transport total. The volume of those employed in Hotels and Catering is forecast to rise by 3.7 per cent between 2007 and 2017.

62 **The only sub-sector of Distribution and Transport where employment volumes are forecast to decline between 2007 and 2017 is Distribution Relating to Motor Vehicles**, a reduction of 2.9 per cent is anticipated in this sector to 61,000 employees. Recent economic events have had a large negative effect on the motor industry in particular, this would seem to compound the previously anticipated decline.

63 Analysis shows that employment by gender in the different sub-sectors of Distribution and Transport varies widely. 78 per cent of employees in the Distribution Relating to Motors sub-sector are male, whereas 62 per cent of employees in the Hotels and Catering sub-sector are female.

64 The anticipated decline in employment in the Distribution Relating to Motors sub-sector could adversely affect the volume of males employed. Therefore should training provision be directed towards males enabling employment in other related industrial sectors? (eg: Retailing Distribution)

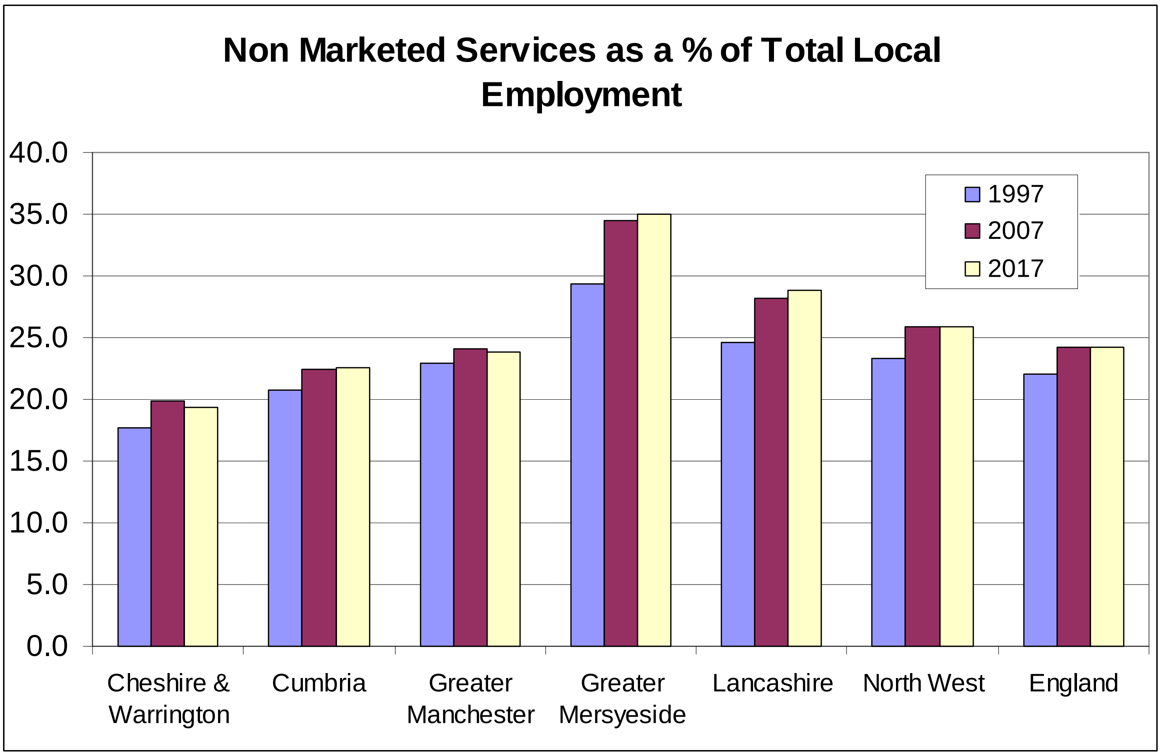
65 In 2007 21.9 per cent of workers (36,000) in the Transport & Storage sub-sector are self employed[11]. According to the Working Futures 3 forecasts this is expected to fall to 18.5 per cent (32,000) in the context of overall growth in this sub-sector heading into 2017. This statistic could be the result of a trend within this overall sector, or could be a result of lower levels of entrepreneurial activity in the region compared to other areas of the country. However, this projection also presents an opportunity, should training provision be shifted away from this area? Or towards providing skills for small business to thrive?

[11] Compared to 11.8% for all industries in the North West

Non-Marketed Services

Non-marketed services is the second highest sector of employment in the region, in 2007, 883,000 people worked in this industrial area. Sub-sectors include: Public Admin & Defence, Education and Health & Social Work.

Figure 8



Source: Working Futures 3 – 6 Sector Split – North West

66 **25.9 per cent of employment in the North West is in Non-Marketed services**, this equates to 883,000 people in 2007 and is forecast to rise by 45,000 to 928,000 in 2017.

67 The highest volume of employment in this sector is in Greater Manchester (318,000). **All local areas within the region are expected to have growth in the absolute volume of people employed in the sector. However, none is anticipated to grow at the same rate as England** (+6.6%). This may be a result of Non-marketed services' current importance to the region compared to England. The highest rate of growth anticipated in this sector between 2007 and 2017 in the North West is in Lancashire (+5.8%).

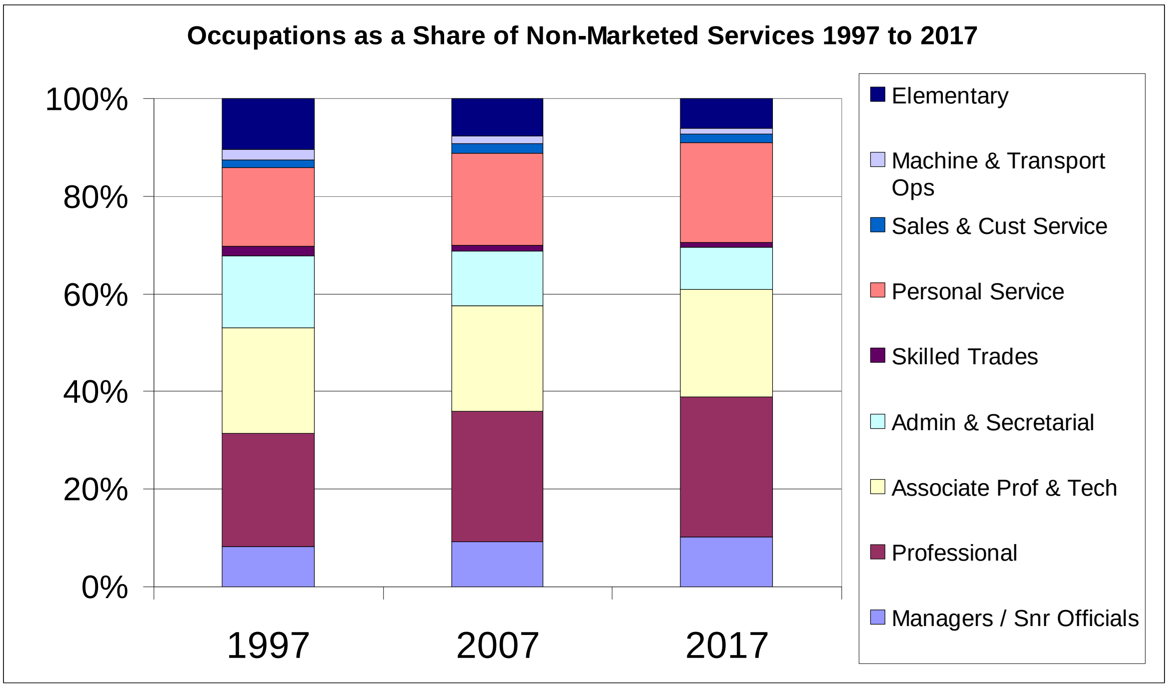
68 Non-Marketed services are very important to Greater Merseyside, this industry sector accounts for 34.4 per cent of all employment in the area, this is forecast to rise to 35 per cent in 2017, indicating the Merseyside economy's reliance on the public sector for jobs. If these projections are realised in the next ten years there will have been a 5.7 percentage points increase in Greater Merseyside in the period 1997 to 2017, the largest increase of any sub-region of the North West.

69 Greater Merseyside has the second highest share of the North West population aged 16-59/64, however it does not have the second highest share of employment in every industry sector (as it does in Non-Marketed services), further highlighting the importance of this sector to the area.

70 In terms of importance to the local economy, Cheshire and Warrington and Greater Manchester are forecast to have a decline in the period 2007 to 2017, where Non-marketed Services will drop by 0.4 and 0.3 percentage points respectively as a proportion of local employment.

Occupational Trends within Non-Marketed Services

Figure 9



Source: Working Futures 3 – 6 Sector Split – North West

71 27 per cent, or 236,000 employees within Non-Marketed Services work in Professional Occupations. This is set to rise to 266,000 or 29 per cent by 2017. The total demand for this occupational area is for 126,000 employees by 2017, 97,000 of these are needed to replace existing staff (76%). This seems like a high rate however, this is a lower rate of replacement demand than many occupational areas within this industry. (The North West replacement demand rate for all industries and occupations is 88 per cent).

72 The second highest volume of employees in the Non-Marketed Services sector is in the Associate Professional and Technical occupational group. 191,000 or 22% are employed in this occupational area. Although the volume is expected to rise to 204,000 in 2017 (+6.9%), the relative share of this occupation within the Non-Marketed Services industry is not expected to change. Of the 85,000 expected increase in employees in this occupation, it is anticipated that 72,000 are needed to replace existing employees (84.6%).

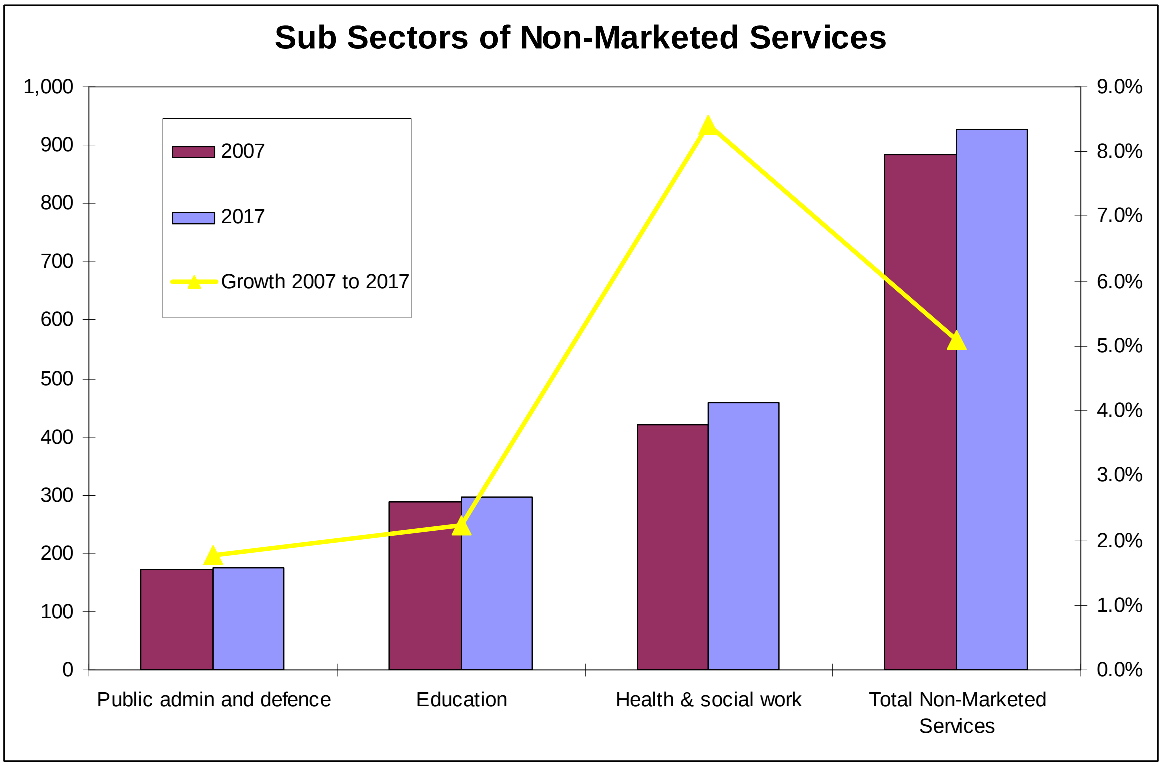
The lower the forecast rate of replacement demand the lower the cost to the employer in recruiting and training new employees.

73 71.2 per cent of employees within the Non-Marketed Services sector are female. This high rate may be attributed to the inclusion of Health and Social Work as well as Education, both of which have traditionally had high rates of female employees. This is not an issue in itself, but if, as previously identified, there is a forecast decline in female participation in the labour market generally, will the Non-Marketed Services sector be particularly negatively effected? Or will steps be taken to mitigate these effects – either through ensuring increased male participation in this sector, or increased female participation in the labour market.

74 38.1 per cent of employees in this sector work part time this is expected to rise to 39.2 per cent of the total or 369,000 employees by 2017 and is the highest rate of any major industrial sector. Given the current economic position this group could be more at risk of financial difficulties or loss of employment, the recession may mean these people taking on secondary employment or an increase in government spending on benefits as a result.

Sub-Sectors within Non-Marketed Services

Figure 10



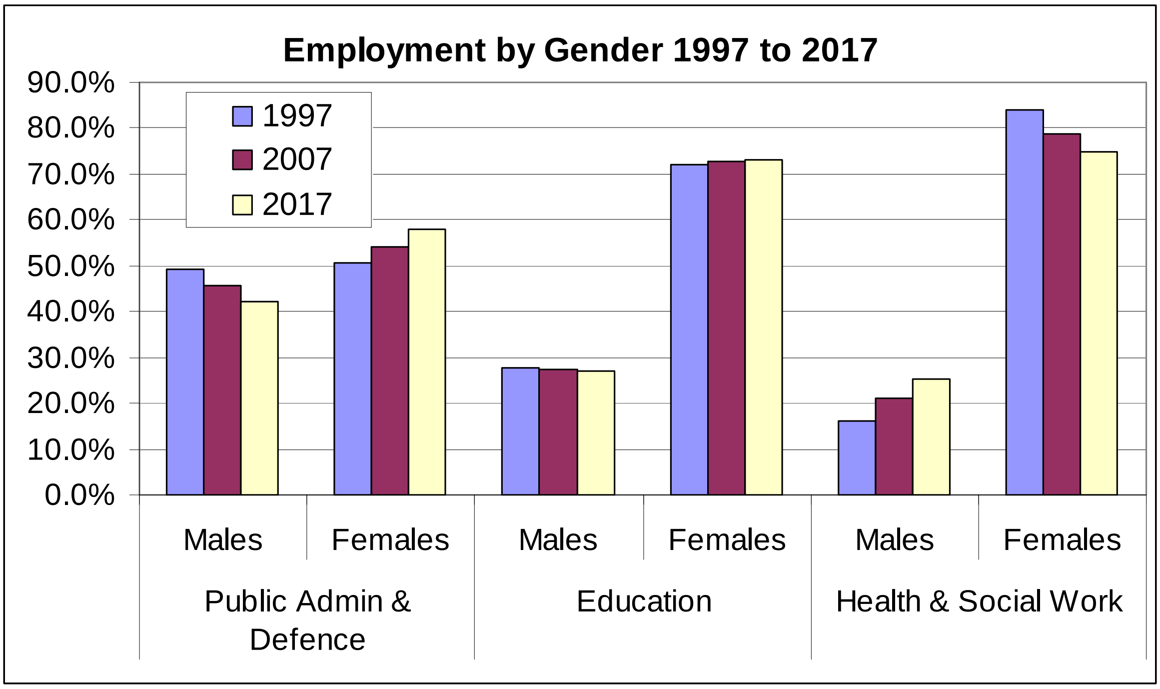
Source: Working Futures 3 – 25 Sector Split – North West

75 Health and Social Work employs 422,000 people in the region, which accounts for 47.8 per cent of the North West's Non-Marketed services employment volume. This is forecast to rise to 49.3 per cent or 457,000 employees by 2017.

76 32.7 per cent of employment in Non-Marketed services is in Education, this equates to 289,000 people, which is set to rise to 295,000 in 2017, an occupational analysis is required to begin to asses the potential training needs of this sub-sector. 52.2 per cent of those working in Education are classed as being in Professional occupations, and 49.9 per cent of the total employed are in Teaching / Research occupational areas, this equates to 144,333 people in 2007. We would expect that this group be catered for by PGCE qualifications delivered through Higher Education Institutions. However the remaining 47.8 per cent of employees (138,000 people) may have training requirements that can be met by LSC funded training provision (This group may include teaching assistants, lab technicians or administrative staff).

77 Public Admin & Defence accounts for 19.5 per cent of employment in this sector in 2007, this represents a volume of 172,000 jobs in the region which is forecast to grow by 1.8 per cent by 2017.

Figure 11



Source: Working Futures 3 – 25 Sector Split – North West

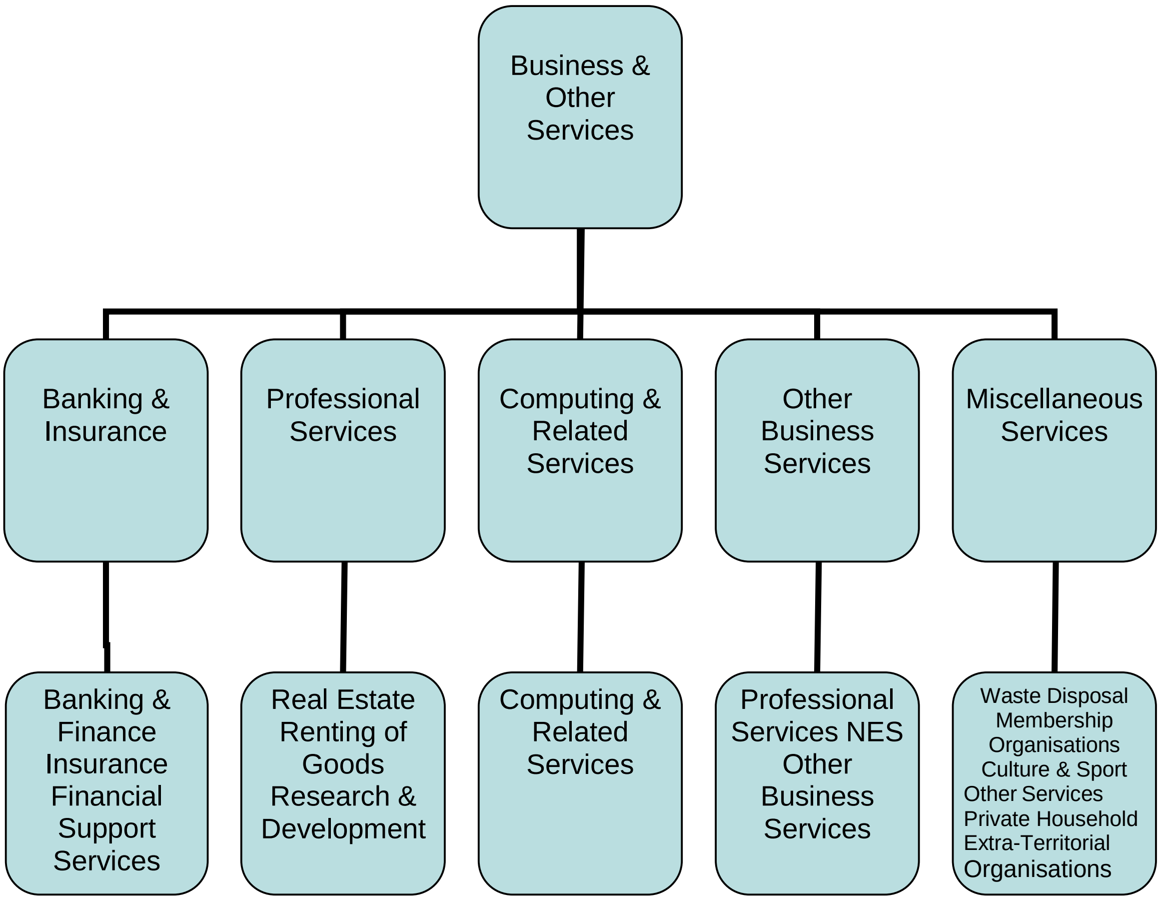
78 At sub-sector level there are vast differences in the make up of employment by gender. Public Admin & Defence appears to be the most balanced of the three, in 2007 males made up around 45 per cent of employment; however the anticipated shifts between 2007 and 2017 are for the existing gap to increase. In Education there is a large gender imbalance with males making up 27.3% and females 73.7% of employees and little movement in this statistic is forecast. Health and Social Work has the largest gender gap with 78 per cent female employees, however, the anticipated trend is for a reduction in the gap between the two.

79 Gender stereotyping issues in some industry areas have been discussed earlier in this document, with issues of the overall reduction in female participation in the labour market and differences in educational attainment by gender. However, with such a marked difference in the Education and Health & Social Work sub-sectors compared to other industry areas, in terms of the balance of their workforce, further research may be required to assess the extent to which these industrial areas are missing out on a potential resource due to historically low levels of male employment.

Business and Other Services

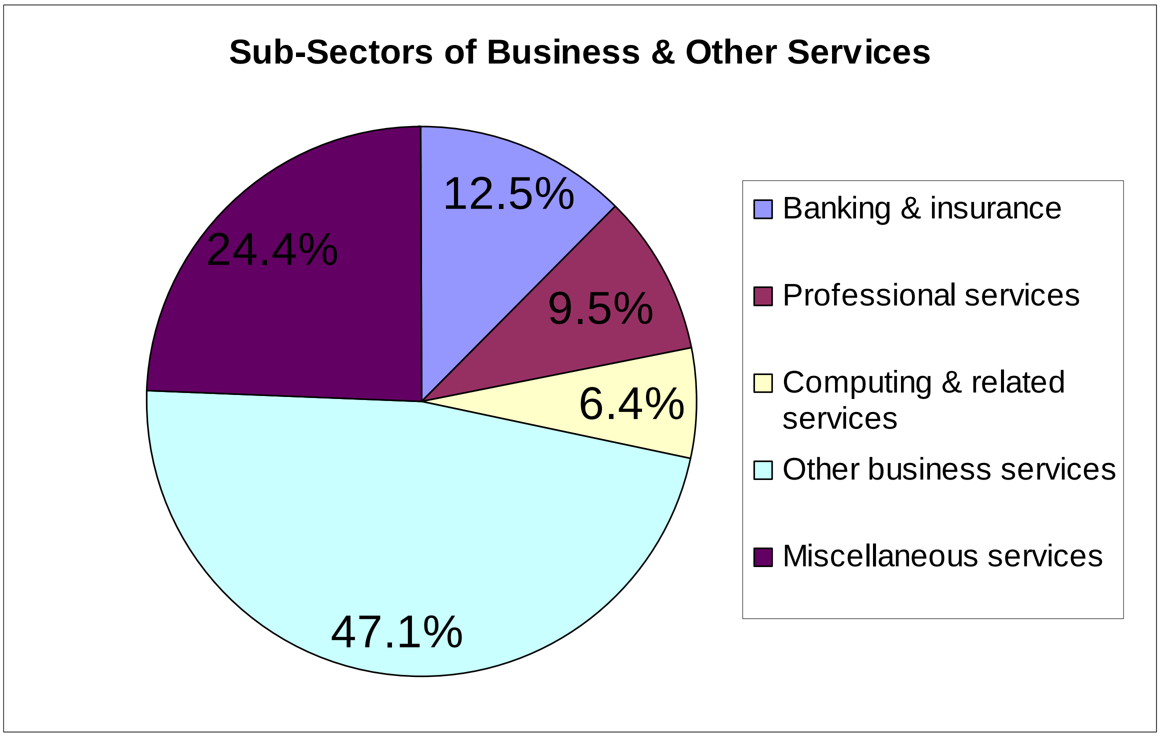
The Business & Other Services sector employs 870,000 people in the North West (2007) and makes up 25.6 per cent of all employment in the region. The Business and Other Services Sector is very broad, including Banking & Insurance, Real Estate, Computing & Related Services as well as Waste Disposal and Culture & Sport

Figure 12: Structure of the Business & Other Services Sector



Source: Standard Industrial Classifications (SIC-Codes) 2003

Figure 13



Source: Annual Business Inquiry 2006

80 Due to the wide range of sub-sectors within the Business and Other Services industry, the following analysis begins with an analysis of these sub-sectors rather than the wider industrial sector as a whole.

Banking & Insurance

81 In 2007 Banking and Insurance employed 109,000 people in the North West, which represents 12.5 per cent of the Business and Other Services sector. 9.3 per cent growth is expected in this sector by 2017, leading to 119,000 people employed.

82 Areas of work within the Banking and Insurance sub-sector include Banking and Finance, Insurance and Financial Support Systems. Within the North West these areas of work account for a particularly high proportion of employment in South Manchester and in Warrington. **Given the impact of the economic downturn on the Banking industry, employment projections in this sector are difficult to forecast and should be considered in light of recent events.**

83 The positive projections for employment for this sub-sector can be broken down by occupation. 52,000 people (43%) of total Banking & Insurance employees work in Administrative, Clerical and Secretarial occupations. Furthermore, of the 22,000 employees forecast to be needed in this occupational area 21,000 (95%) are required to replace existing staff.

84 This is a particularly high rate of replacement demand compared to other occupational areas. This may be regarded as symptomatic of this occupational area (within this industrial sector), however, further analysis could be carried out into the possible role that training provision could play to

retain more staff and ultimately increase productivity and reduce overall costs (recruitment etc) to the employer.

Professional Services

85 9.5 per cent of people working in the Business & Other Services sector are employed in Professional Services. **This equates to 83,000 people in 2007, however it is the only sub-sector of this group that is forecast to decline by 2017, to 7.6 per cent of the sector, or to 77,000 people (a 7% reduction).**

86 Sub-divisions of Professional Services include, Real Estate, Renting of Goods and Research & Development.

87 The forecast decline in Professional Services is centred in Real Estate and in the Renting of Goods Sub-sectors. Research and Development is anticipated to increase by 42 per cent between 2007 and 2017 although volumes are relatively low (10,000 in 2017); this is a positive step in the building of a knowledge based economy.

88 Working Futures 3 is partly based on ABI data from 2006, which is pre-economic slowdown. These forecasts show a 9.6 per cent decline in employment in the Real Estate sector. **Given the links between the financial instability in the banking sector and the housing market, any 2006 based projections of decline may be magnified in reality, the 2007 figures show that this issue could affect as many as 52,000 people in this sub-sector in the North West.**

Computing & Related Services

89 56,000 people are employed in the Computing & Related Services sector in 2007, Working Futures 3 forecasts that this will rise to 66,000 (+18.3%) by 2017. This area of work accounts for 6.4 per cent of employment in the Business & Other Services sector.

90 In 2007 69 per cent of those employed in this sub-sector were males, this is forecast to rise to 78 per cent by 2017 and the volume of females employed in this sector is set to decline by 3,000 (17.6%). As with some other areas this may be a result of long standing stereotypes prevalent in the industry. Alternatively this could be an opportunity for training provision to facilitate this sector's ability to access an underused resource of the labour market. **Together with occupational statistics this data could indicate a need for training provision to develop Professional and Associate Professional & Technical skills relevant to this industry in the female working age population.**

Other Business Services

91 Other Business Services accounts for 47.1 per cent of employment of the wider sector. In 2007 there were 410,000 employees, this is anticipated to rise to 504,000 (+22.8%) by 2017.

92 Administrative, Clerical and Secretarial occupations are expected to account for 20 per cent of employment in this sub-sector by 2017, and although this is a slight reduction from 2007 these occupations are still expected to increase in volume by 13.5 per cent (+50,000). However 38,000 of these are anticipated to be needed to replace existing staff (76%), compared to an overall replacement demand for other Business Services of 61 per cent. This comparatively high rate of turnover for Administrative employees could be symptomatic of the occupation, or could indicate a need for further training provision in this area.

Miscellaneous Services

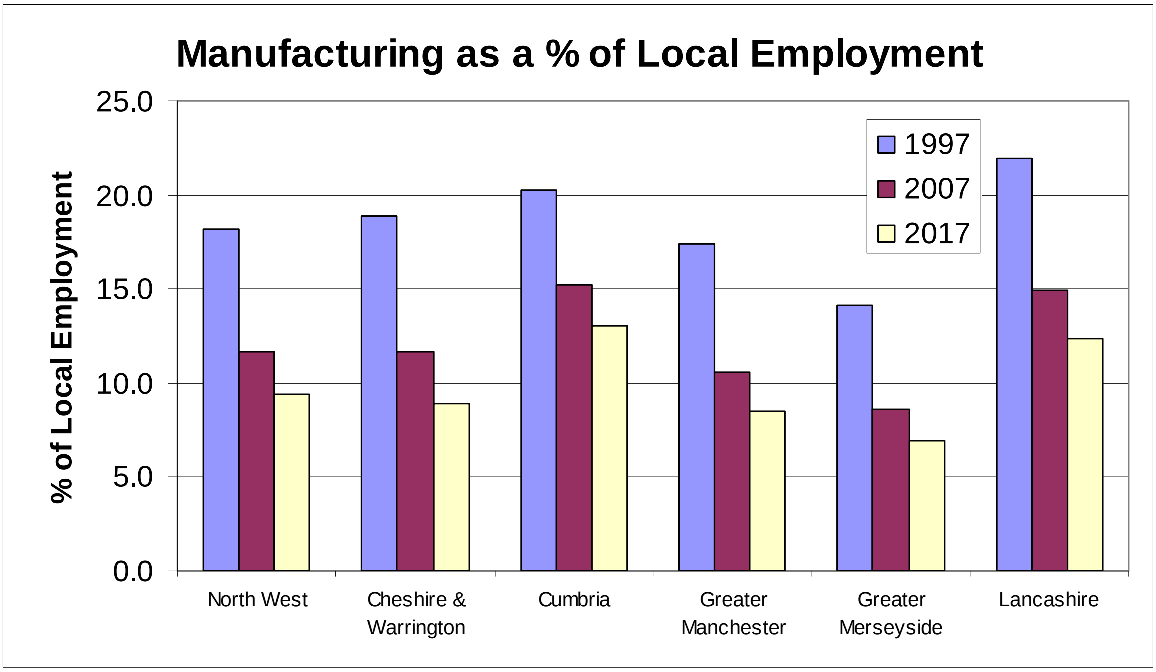
93 212,000 people are employed in the Miscellaneous Services sub-sector. Working Futures 3 projects this figure to rise to 241,000 by 2017 (+13.3%). Miscellaneous Services accounts for 24.4 per cent of the wider Business & Other Services sector in 2007.

94 Overall 107,000 additional staff are expected to be required in this sector by 2017, 79,000 of these are to replace existing employees. An occupational analysis shows that Associate Professional and Technical roles are important to this industry - by 2017 it is forecast that just under 20 per cent of employees in this sector will be in these kind of roles and that of the 20,000 extra employees required, 13,000 will be needed to replace existing staff.

Manufacturing

396,000 people are employed in the manufacturing industry in the North West, which accounts for 11.6 per cent of total regional employment. Manufacturing covers a wide range of sub-sectors which include: Food, Drink & Tobacco, Textiles & Clothing, Wood, Paper & Publishing, Chemicals & Non-Metal Minerals, Metal & Metal Goods, Engineering, Transport Equipment, Manufacturing nes & Recycling

Figure 14



Source: Working Futures 3 – 6 Sector Split – North West

95 Figure 14 shows that **Manufacturing is predicted to continue its sharp decline in all areas of the region, this is also the case nationally**. However this sector was more important to the region's economy (as a proportion of total employment) than the rest of the country as a whole. Manufacturing is expected to fall as a proportion of total employment by 8.8 percentage points between 1997 and 2017 in the North West to 9.4 per cent of overall employment (compared to a national decrease of 7.5% points).

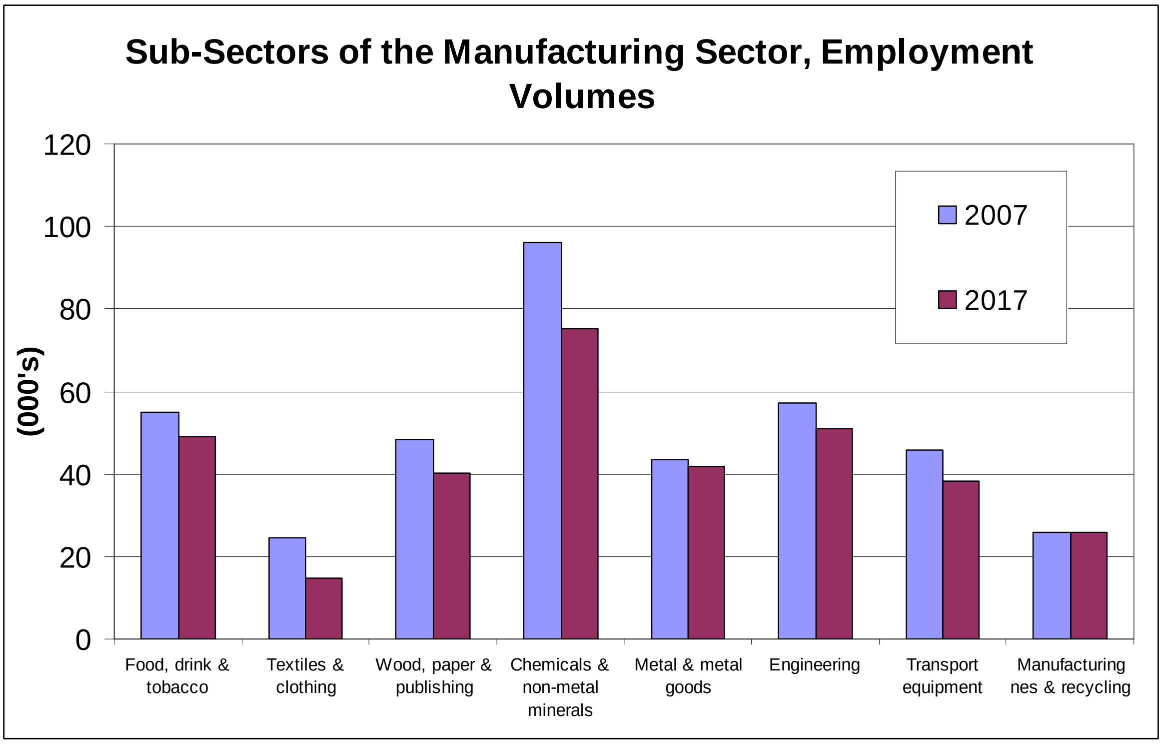
96 **Working Futures 3 forecasts that there will be a loss of 60,000 people employed in the Manufacturing sector in the region between 2007 and 2017.** 21,000 of this is expected in Greater Manchester.

97 Within the region, Manufacturing accounts for particularly high levels of employment (in 1997) in both Cumbria and Lancashire (around a fifth of all employment). Both areas are expected to have significant reductions in manufacturing employment to 13% and 12% of the local economies respectively. In Cumbria the volume of Manufacturing employees is expected to fall to 34,000 people by 2017, in Lancashire the forecast volume of Manufacturing staff is 87,000.

98 Arguably the largest shift in economy with regards to Manufacturing is expected to be in Cheshire & Warrington, where a 9.9 percentage point reduction in its market share is anticipated leading up to 2017. Diversifying the workforce in this way may be seen as a positive step, however the strong growth in the Financial sector in Warrington should be closely monitored given recent economic events' impact on this sector.

99 A further breakdown of the Manufacturing sector is shown in Figure 15.

Figure 15



Source: Working Futures 3 – 6 Sector Split – North West

Chemicals & Non-Metal Minerals

100 24.3 per cent of Manufacturing employment is in the Chemicals and Non Metal Minerals sub-sector. In 2007 96,000 people were employed in this area of work, however, by 2017 this is expected to fall by 21.8 per cent to 75,000.

101 The projection for the Chemicals and Non-Metal Minerals sub-sector is that no occupational area will have an increase in employment levels in the next ten years. Currently the highest volumes of employment are amongst Machine & Transport Operatives (23,000 jobs, 24.2% of the workforce), however, this occupational area is also expected to have the largest reduction (-7,000 between 2007 and 2017). Skilled Trades Occupations are also a significant area of employment (16,000 jobs in 2007) that is set to decline. The forecast reduction in employment levels in every occupational area of this industry could mean that training requirements should be focussed on re-skilling workers or a consideration of transferable skills to enable employment elsewhere.

Engineering

102 14.5 per cent of Manufacturing employment is in the Engineering sub-sector. In 2007 57,000 people were employed in Engineering, this is expected to fall by 11.1 per cent by 2017 to 51,000. The forecasts for engineering are for a slower decline than the rest of the Manufacturing sector, with a reduction of 6,000 jobs in the 10 year period. However, given the sharp falls experienced in this sub-sector in the previous 10 years (1997 to 2007), of -38,000 jobs, combined with the current economic climate, it is possible that this projection could under-estimate the downward trend for the next decade in engineering.

103 No occupational area of Engineering is forecast to increase in the volume of employment between 2007 and 2017. However, the volume of Managers & Senior Officials, Professional, and Associate Professional & Technical occupational employment is expected to remain static in the next ten years (around 24,000 workers). In 2007 Skilled Trades occupations account for 20 per cent of the workforce (12,000 jobs), this is set to decrease to below 10,000 by 2017. The reduction in Skilled Trades may reflect the reduction of employment in the sector as a whole – what would be the nature of the engineering sector without those with Skilled Trades? The implications for training requirements for the engineering sector are not clear, however even taking the net reduction of 6,000 jobs anticipated up to 2017, 13,000 workers are still needed due to the requirement of 19,000 employees through replacement demand.

Food, Drink & Tobacco

104 Food, Drink & Tobacco accounts for 13.9 per cent of Manufacturing employment in 2007, this equates to 55,000 jobs in the region. By 2017 Working Futures 3 forecasts that this will reduce by 6,000 (-10.7%) to 49,000.

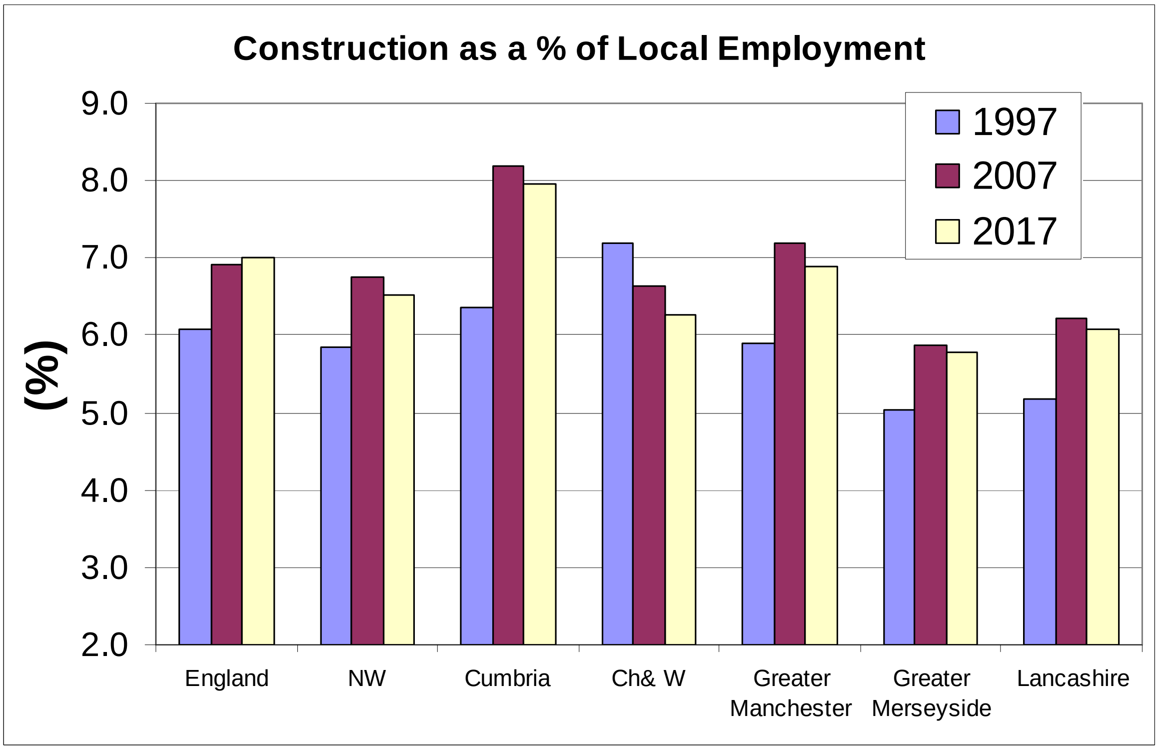
105 In 1997, 19,000 female workers were employed part time in this sub-sector. By 2017 it is anticipated that this will reduce to nearly 0. The overall forecast for this sub-sector is a reduction from 79,000 to 49,000 between 2007 and 2017, however, the forecast for males is relatively static (around 36,000 employed). This apparent disparity between males and females in the Food, Drink & Tobacco sub-sector may require further investigation: why is this shift in employment expect to occur? What are the potential implications for training requirements? (either up-skilling or re-skilling).

106 The reduction in part time female workers links well with an occupational forecast analysis for this sub-sector. Machine & Transport operatives account for 26 per cent of the workforce in 2007 (14,000 jobs), which is set to decline by around 2,000 between 2007 and 2017. Further occupational analysis determines a reduction in lower skilled roles in this sub-sector, and an increase in higher level positions, suggesting a need for up-skilling of the current workforce.

Construction

In 2007 230,000 people were employed in the Construction sector. This accounted for 6.7 per cent of total employment in the region. Initial forecasts for the Construction sector are for 1.5 per cent growth in employment levels over the next ten years, however, the impact of recent economic events may have affected this dramatically.

Figure 16



Source: Working Futures 3 – 6 Sector Split – North West

107 Construction accounts for a similar proportion of employment in the North West as is seen nationally (Figure 16), this sector employs a slightly higher proportion of the Cumbrian workforce and slightly lower than the national average in Greater Merseyside (2007).

108 The key difference in forecasts between the national picture and the region is the slight increase anticipated nationally, compared to the slight decline in the North West.

109 These forecasts are shown for the 10 year period 2007 to 2017, they do not take into account the wide ranging effects of the economic downturn on the construction industry.

110 The immediate effects of the current economic situation are high levels of unemployment, as well as potential pay cuts for those staff who are retained. However, the slowdown in construction could also lead to more public sector construction projects being undertaken, as well as a rise in the volume of self employed workers as the major companies lose staff. The Working Futures 3

projection for the proportion of Construction employees who are self employed is for a decrease from 79,000 to 74,000 (however, a slight increase in share to 32.1 per cent of the total workforce), if this volume decrease is proved to be incorrect, the potential implications for the commissioning of training provision must be considered. For example, there may be increased future requirements for generic skills in operating a small business rather than industry-specific skills.

111 In 2007 the balance of occupations within the Construction industry was very heavily weighted towards Skilled Trades Occupations – 50 per cent of employees (114,000 people) were in this occupational area. This could be anticipated given the nature of the industry and was expected to be the case in 2017. The volume of those in Skilled Trades occupations was forecast to rise to 117,000 by 2017, however when replacement demand is factored in, this leads to a requirement of 38,000 employees in Skilled Trades over the next ten years (2,000 net increase + 36,000 replacement demand). This is compared to an overall requirement for the construction industry in the region for 78,000 employees, 74,000 of which were projected to be required to replace existing staff.

112 Elsewhere within the industry the balance of occupations is not expected to change significantly, only a slight rise in the proportion of employees who are Managers and Senior Officials to 17 per cent (39,000) of the total by 2017.

113 As previously stated, the volumes of employment stated here may have changed fundamentally because of the global economic crisis, however, **the balance of occupations required in the Construction industry, the possible need for re-skilling of staff as well as the levels of replacement demands within Construction all still have strong implications for the deployment of training provision** – mainly showing that training is still required in the skilled trades occupations of Construction both in the short term and longer period of possible industrial recovery.

114 23,700 Construction employees in the North West are female. 50 per cent of employees within the Construction industry are in Skilled Trades Occupations (114,000). However, **less than 0.05 per cent of the total Construction employees are females in Skilled Construction Trades** (less than 200 employees in the North West). This imbalance could be attributed to prevailing stereotypes within this industry, however given that females make up around 50 per cent of the working age population, there is a potential resource to the Construction labour market that is not being accessed.

Figure 17 Top 5 (+Skilled Trades) Female Occupations in Construction

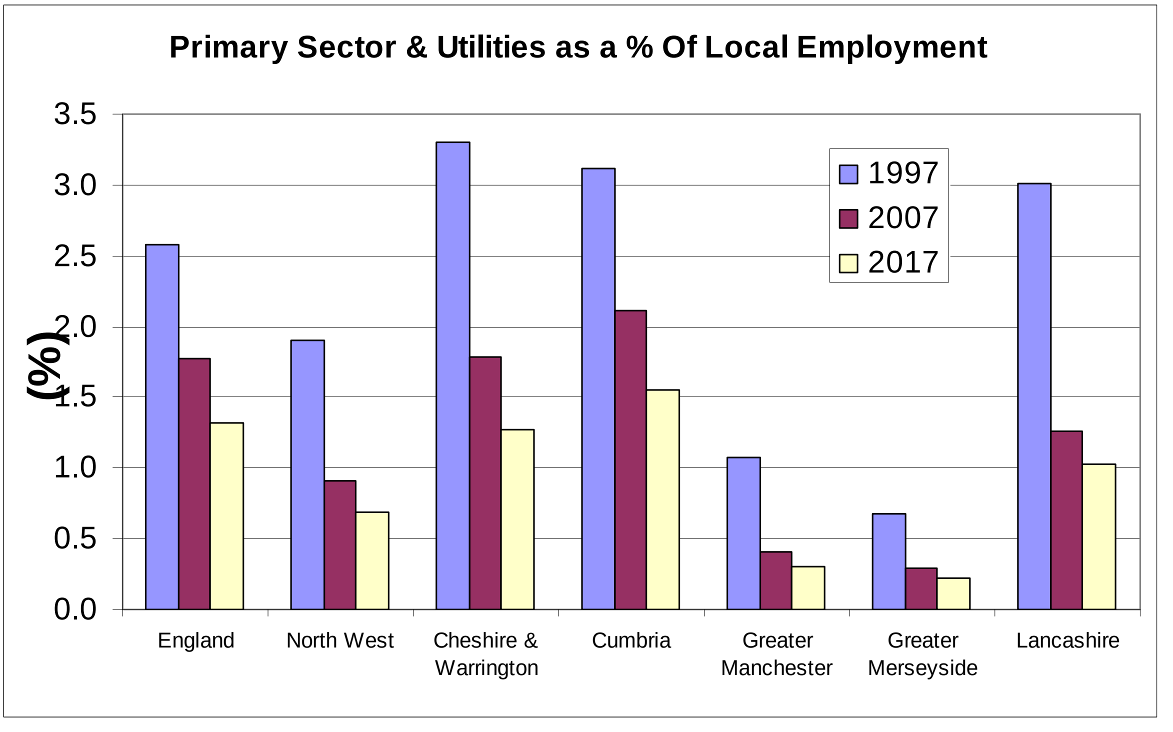
% of Female Employees - Construction		2007	2017
1	Administrative Occupations	30.1%	26.8%
2	Corporate Managers	17.5%	22.7%
3	Secretarial & Related Occs	14.9%	9.6%
4	Bus/Public Serv. Assoc Prof.	8.6%	10.3%
5	Elementary: Admin/Service	6.8%	6.6%
#18	Skilled Construct. Trades	0.5%	0.6%

Source: Working Futures 3 SOC2000 Sub-Major Groups

Primary Sector & Utilities

31,000 People are employed in this sector in the region in 2007. Despite the Primary Sector and Utilities employing significantly less people in the North West than other industrial areas, this wide ranging sector contributes significantly to the region's GVA and has strong links to the Rural Economy and the Tourism industry.

Figure 18



Source: Working Futures 3 – 6 Sector Split – North West

115 The Primary Sector & Utilities employ less than 1 per cent of the workforce of the region in 2007, this has dropped from just below 2 per cent in 1997 and the downward trend in terms of the volume of employees is expected to continue in the 10 year period leading up to 2017 (Figure 18).

116 In volume terms the workforce of this sector has declined from 61,000 (1997) to 31,000 (2007), **the rate of reduction is not anticipated to be as fast between 2007 and 2017**, a forecast reduction of 20.8 per cent to 24,000 employees.

117 The Primary Sector and Utilities can be broken down into Agriculture[12] and Mining, Quarrying & Utilities[13] and is unsurprisingly a proportionately higher employer in rural areas than the urban centres of the region (Figure 18). A volume analysis of this industry would not be in keeping with data protection guidelines, however it is possible to state that the region accounts for 6.6 per

[12] Comprising Agriculture, Forestry, Fishing
[13] Comprising Coal Mining, Oil & Gas, Uranium Mining, Metal Ores, Other Mining, Electricity, Gas Supply, Water Supply

cent of the national employment volume in this industry sector (much lower than the approx 14% of the National working age population), and that Cumbria has 16 per cent of North West Primary Sector & Utilities employment – higher than its share of the working age population of the region.

118 Within many sub-groups[14] of the Primary Sector & Utilities industry, Skilled Trades Occupations employ the highest volume of people in 2007, a total of 35 per cent of the workforce. However this has fallen from 22,000 to 11,000 between 1997 and 2007, and the rate of decrease (-50% of volume) is forecast to continue. Replacement demand modelling shows that even when a reduction of around 5,000 staff is expected, 4,000 new employees will be needed to replace existing employees, leading to a net reduction of 1,000 Skilled Trades staff from the Primary Sector & Utilities industry.

Agriculture

119 Agriculture etc (as defined above) has established links with other industry sectors, including retail of food as well as travel and tourism, and forms a part of the rural economy. For example, the landscape of the Lake District would be very different without the Agriculture industry, very important to the Travel and Tourism sector which is worth £3 Billion (or 18 million visitors per year) in the region.

120 Rural businesses account for 40% of the business stock, 23% of regional GVA and 25% of employment. Agriculture accounts for just 3% of Rural GVA and the Service sector 63%[15]. Agriculture appears to play only a small part directly in the Rural economy.

121 LANTRA[16] have identified that companies who come under their "Footprint" are less likely to engage in High Performance Working Practices (HPWPs) across 18 indicators[17] than the average company. This could indicate a need for training provision in generic business skills in the Agriculture sector. One issue raised by the LSC funded Review of Land-based Provision in North West England[18] was the lack of industry specific brokerage service for this sector, however Land-based businesses utilising generic brokerage services can gain benefit from standard business skills which could result in a greater contribution of Agriculture to the very significant GVA levels generated by the Rural Economy.

122 The North West is unusual in that it has 3 successful Land-based specialist Further Education Colleges. These institutions provide a valuable resource that is currently appropriate to the region. The employment forecasts for the Agricultural sector may indicate a need for a more diverse approach to training.

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[14] Including Agriculture, Forestry, Fishing, Coal Mining, Electricity, Gas Supply, other Mining

[15] Regional Economic Strategy (RES) NWDA 2006 http://www.nwda.co.uk/what-we-do/policy-and-strategy/regional-economic-strategy/res-detail.aspx

[16] Lantra is the Sector Skills Council for environmental and land-based industries. http://www.lantra.co.uk/connect-magazine/

[17] Including: Training of Staff, Work shadowing, Owning a Business Plan, Training Needs Assessments

[18] Research & Consultancy Service (RCU) 2007

Mining, Quarrying & Utilities

123 In 2007 just over 10,000 people in the region were employed in the Mining Quarrying & Utilities sub-sector, this is forecast to decline by 21.5 per cent over the 10 year period. As with Agriculture, the occupational structure of these industries is weighted towards those in Skilled Trades Occupations, with Managers and Senior officials accounting for large volumes of staff in most sub-sectors. It is anticipated that there will be an on-going need for skilled workers in this sector, however as with the overall volume of employment there is a projected decline.

124 The implications for training provision in this sub-sector are mixed, with an on-going need for skilled employees generating a requirement for appropriate training provision. The overall reduction forecast for the sector in employment volumes suggests a need for re-skilling of existing staff into growth areas of industry.

125 West Cumbria, with its existing nuclear expertise and wind, wave and tidal assets, has the potential to make a major contribution to the national energy strategy which seeks to both secure the energy supply and combat climate change. The Masterplan[19] for Britain's Energy Coast sets out how this can be achieved and emphasises the skills which will be needed to successfully deliver the vision and transform the economic prospects of West Cumbria. It is home to the largest single concentration of nuclear facilities in the world and the local workforce has built up considerable skills and expertise in nuclear and related technologies, including waste management, storing and packing and associated engineering[20].

126 The North West has potential assets in renewable energy technologies that could see the region becoming a world leader in an emerging market. The Working Futures 3 employment statistics for this sub-sector show around 11,000 employees in the region in 2007, however, as previously stated, this report is an analysis of the WF3 data set, information published on the North West Regional Development Agency's website from other sources suggests that employment levels in the energy sector are closer to 50,000 the discrepancy in the figures suggests a difference in definition of the sector. However **the role, and future role, of the clean energy market are potentially very important to the region's economy and training provision should be available to enable the fulfilment of this potential**.

[19] http://www.cumbriavision.co.uk/files/documents/WCSM_Summary(Final).pdf
[20] Extract from "Skills Needed for the Upturn" - Regional Skills & Employment Board March 2009